

PURPOSE

One method of slowing the motion of a vehicle is to use the compression of the engine as part of vehicle braking. This method is often referred to as compression braking or exhaust braking. Engine braking can produce excessive, undesirable noise when muffler systems are not functioning as designed or are otherwise inadequate.

Noise from engine braking in vehicles with inadequate muffler systems has led some communities to take actions to restrict the noise. Compression braking is typically an unavoidable result of operating a vehicle that the driver cannot prevent or fully disengage. However, for some vehicles there are driver choices as to whether or when engine compression braking is used. Objectionable noise levels *may* be produced by any car or truck when using compression braking and often are related to equipment failure or aftermarket modifications.

There are several advantages to compression braking on vehicles and especially on large trucks. In addition to assisting deceleration, when a truck engine brake system is engaged, it helps prevent the conventional truck air brakes from overheating, thus saving on the normal wearing life of the truck air brakes. This is especially true on roadways with steep downgrades with long distances, where the safety of the truck can be enhanced using engine brakes.

Communities have installed or requested signing on county highways to address noise concerns associated with use of compression braking. The Fond du Lac County Highway Department controls traffic signs on highways maintained by Fond du Lac County. Local governments do not have the authority to erect signs on county highways.

The Fond du Lac County Highway Department supports efforts to deal with excessive noise from all vehicles and encourages enforcement of laws requiring effective mufflers (for example, [State Statute Section 347.39](#)). The use of signs specific to engine or compression braking has become popular among many communities, although it is unclear whether those signs are effective or necessary. Generally, the Fond du Lac County Highway Department does not allow installation of traffic signs on county highways that have not been shown to be necessary or effective. In the case of engine braking, the Fond du Lac County Highway Department has chosen to work with communities and allow limited use of these signs on county highways under certain conditions, despite the lack of evidence that they are effective in reducing noise problems.

POLICY

The Fond du Lac County Highway Department *may* permit these signs on highways under County jurisdiction subject to the requirements included here:

1. Requests for a permit to allow these signs must come in writing from another government agency to the Fond du Lac County Highway Department Office and *should* contain the following information:
 - a. Locations where signs are to be installed, including county trunk highway letter and distance to the nearest public roadway intersection
 - b. A copy of the ordinance requiring engine brake mufflers to be used at the locations where the signs are being requested
 - c. Assurance that sign will be free standing (not attached to other signs)
2. The local government **shall** be responsible for all costs related to the signing including: supplying, installing, and maintaining the signs in conformance with the permit. All sign erection and maintenance shall be performed by the Fond du Lac County Highway Department at the expense of the requestor. The local government **shall** furnish their identification sticker on the sign.
3. The local government must be committed to actively enforce the requirements of the signs with local law enforcement personnel.
4. Only the standard ENGINE BRAKE MUFFLERS REQUIRED sign (R10-64) *may* be used on highways under county maintenance responsibility and those signs *may* be permitted only on conventional highways at or near the corporate limits of the community (see Figure 1). This sign **shall not** be used on freeways, expressways, interchange ramps, or site-specific locations on

conventional highways.

- a. For freeway locations going through communities, engine brake signs *may* be permitted on conventional county highways after the entry point to the conventional highway from the freeway, provided signs are already approved at the city/village limits.
- b. Engine brake signs *may* be allowed for urbanized townships provided they have the means to enforce it. Documentation **shall** be provided by the local law enforcement indicating that the ordinance will be enforced throughout the township. Urbanized townships are defined by having at least two of the following features:
 - i. Urban cross section
 - ii. Residential development abutting the highway that meets the definition of “semi urban district” as defined in [Wisconsin State Statutes 346.57\(1\)\(b\)](#)
 - iii. Reduced speed zone
 - iv. Qualify for an unincorporated community sign.

For qualifying urban townships, only 1 sign is allowed in each direction on any given county highway. The signs **shall** be installed at the township limits.

- c. The local government must obtain the approval of the Fond du Lac County highway department engineering staff for the location of the sign. The sign language **shall** meet the requirements of the WisDOT R10-64 sign plate as described in item 4.
- d. Any other signs related to use of engine braking installed on highways under county jurisdiction within or for the local government that do not meet the requirements of this policy *should* be replaced at the expense of the local government, as opportunities arise (knockdowns, improvement projects or replacement due to age) to comply with this policy.

Figure 2. R10-64 Sign

